

REMARKS

Summary of the Office Action

In the Office Action of June 16, 1998, claims 2-4 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Takahashi*, JP 5-207590 in view of *Sariti*, U.S. Patent No. 3,079,472. Claim 5 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Takahashi* in view of *Sariti* and further in view of *Lee et al.*, GB 2,278,251 or *Numa*, JP 55-118299. Claims 6 and 8-9 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Sariti* in view of *Nakamura*, U.S. Patent No. 4,969,196. Claim 7 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Sariti* and further in view of *Lee et al.* or *Numa*. Claims 10 and 12-13 stand rejected under 35 U.S.C. § 103(a) as being obvious over *Takahashi* in view of *Sariti* and further in view of *Nakamura*. Claim 11 stands rejected under 35 U.S.C. § 103(a) as being obvious over *Takahashi* in view of *Sariti* and *Nakamura* and further in view of *Lee et al.* or *Numa*.

Summary of the Response to the Office Action

Applicants thank the Examiner for the courtesies extended during the interview of September 7, 1999.

Although Applicants do not necessarily agree with the reasoning expressed in the Office Action, in order to expedite the prosecution of this case, Applicants are amending claims 4, 6 and 10 to describe and point out the invention more clearly. Claims 14-30 are added. Claims 2-30 are currently pending in this application.

The Rejections under 35 U.S.C. § 103(a)

Applicants respectfully traverse the rejections under 35 U.S.C. § 103(a) for the following reasons:

Claim 4, as amended, recites a combination “wherein the top plate, the plate-shaped magnet and the back plate each has a width that is equal to or narrower than a width of the rectangular frame in its shorter axis, and . . . a length that is equal to or shorter than a length of the rectangular frame in its longer axis.” Support for the language of the amendment may be found, for example, in FIG. 1 of the present application and at page 6, line 21 through page 7, line 2 of the specification.

Applicants respectfully submit that the rejections based on the combination of *Takahashi* and *Sariti* are based on an incorrect reasoning. As discussed during the interview, the Office Action takes the position that since *Takahashi* and *Sariti* do not exclude certain shapes of the frame and the diaphragm, they can be combined with other knowledge found in other prior art to result in the present invention. However, Applicants respectfully point out that the proper question to ask is not what these references do not teach, but rather what they do teach, and whether they provide a suggestion or motivation to combine them in the manner proposed in the Office Action.

The present invention is directed to television speakers, and more specifically, to a speaker mounted on a side of the television. Such a speaker needs to be thin in order to minimize the overall horizontal size of the television console. At the same time, such a speaker needs to

provide a high output without having its magnetic flux lines interfere with the television tube. As noted during the interview, none of the cited references are directed to television speakers, and none of the references are concerned with the problem of making a thin speaker whose magnetic flux lines might interfere with the television tube.

The arrangement recited in claim 4 results in advantages not taught or recognized by the cited references, singly or in combination. Specifically, the present invention allows obtaining a high magnetic flux density, ensuring that a relatively small speaker can produce a relatively large sound output, thus reducing space needed for speaker installation. In other words, the space occupied by a cabinet for the speaker of the present invention is the same as the space occupied by a cabinet for a prior art speaker, while a sound output in the speaker of the present invention is larger than a sound output of the prior art speaker. This advantage results due to the fact that the magnetic circuit is confined within the frame and has the same shape as the frame.

On the other hand, *Sariti's* frame and magnetic circuit are all square shaped, and since *Sariti's* vibrating diaphragm is square or circular, rather than an elliptical one of the present invention, it is impossible to form a thin speaker. *Sariti* fails to teach or suggest that a vibrating diaphragm be made elliptical so as to form a thin speaker in order to install the speaker within a small space. For this reason, contrary to the statements in the Office Action, one of ordinary skill in the art would not have been motivated to change *Sariti's* square or circular vibrating diaphragm into an elliptical diaphragm one (such as that disclosed by *Nakamura*).

In fact, even if one of ordinary skill in the art tried to use an elliptical diaphragm in the speaker disclosed by *Sariti*, this would result in nothing more than a speaker shown in the attached FIG. A, where a magnetic circuit has a square shape. This type of speaker does not produce a high magnetic flux density.

While some of the cited references suggest a speaker with an elliptical vibrating diaphragm, a magnetic circuit provided by such a speaker is circular or square, and must be large in order to obtain a high magnetic flux density, as shown in the attached FIG. B. However, since the magnetic circuit of the prior art speaker has a width that is larger than that of the frame in its short axis, such a speaker is inappropriate for a standard television receiver, since it will interfere with the image on the television screen.

In contrast to the arrangements shown in the attached FIGs. A and B, the present invention allows for a provision of a magnetic circuit further illustrated in the attached FIG. C, which requires that a magnetic circuit be rectangular and a magnet be large, so as to obtain a high magnetic flux density, thereby producing as large as possible driving force for driving the voice coil. Further, since the magnetic circuit shown in FIG. C has a width that is equal to or narrower than that of the frame in its shorter axis, and a length that is equal to or shorter than that of the frame in its longer axis, such a speaker easily fits into a small and limited space, while at the same time ensuring a large sound output.

Additionally, with regard to *Sariti*, Applicants again direct the Examiner's attention to the use of the term "rectangular" by *Sariti* in col. 2, lines 56-59. As discussed during the interview,

Applicants believe that the use of that term by *Sariti* is contrary to the accepted geometric meaning of that term, and is restricted to a specific type of rectangle--i.e., a square, as shown in FIG. 2 of *Sariti*. FIG. 1 of *Sariti* shows isometric views of the frame 48 shown in FIG. 2 and components that fit into that frame. Since the frame 48 is clearly a square, as shown in FIG. 2, all the components that fit into the frame 48 also must be square. Applicants continue to believe that *Sariti* fails to disclose a rectangular frame whose length is different from its width, and respectfully request reconsideration of the Examiner's position.

During the interview, the Examiner raised the issue of whether the term "magnetic circuit" is properly used in the claims and in the attached FIGs. A-C. Applicants have considered the issue, and believe that the term is being used properly, and would be understood by one of ordinary skill in the art.

M.P.E.P. § 2144.03 states that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). Further, for a proper rejection under 35 U.S.C. § 103(a), "the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention." See M.P.E.P. § 2141. Accordingly, in view of the above arguments and amendments, claim 4 is believed to be allowable under 35 U.S.C. § 103(a) over the cited references, singly or in combination.

Claims 6 and 10 are allowable for essentially the same reasons as those applicable to claim 4, as well as for the features recited therein.

Claims 2, 3 and 5 depend from independent claim 4 and are allowable under 35 U.S.C. § 103(a) at least because claim 4 is allowable.

Claims 7-9 depend from claim 6 and are allowable under 35 U.S.C. § 103(a) at least because claim 6 is allowable.

Claims 11-13 are allowable under 35 U.S.C. § 103(a) at least because claim 10 is allowable.

New claims 14-30

New claims 14-30 are added to provide more complete coverage for the present invention. Support for the language of these claims may be found in FIGs. 1-2 and page 3, line 22 through page 7, line 7 of the present application, as well in the inherent nature of the structure disclosed in the specification. These claims are allowable over all the references of record for the reasons discussed during the interview. Specifically, claims 15, 17, 19, 20, 23 and 30 recite that the magnetic circuit has the same shape as the frame (rectangular or elliptical), which is not taught or suggested by the cited references, singly or in combination. Claims 14, 16, 18, 26 and 28 recite that the magnetic circuit is formed by first and second magnets (shown as elements 2 and 4 in the figures of the present application), which is not taught or suggested by any of the cited references. Accordingly, these claims are allowable over all the references of record.

CONCLUSION

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application, withdrawal of all rejections, and the timely allowance of all pending claims.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative to expedite the prosecution.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

Respectfully submitted,

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